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**RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/069,228**DATE: 05/08/98  
TIME: 12:48:09**INPUT SET: S25681.raw**

**This Raw Listing contains the General Information Section and up to the first 5 pages.**

**SEQUENCE LISTING****ENTERED**1                   **(1) General Information:**

2

3

4                   **(i) APPLICANT:**                   Gregory Plowman  
5   Douglas Clary

6

7                   **(ii) TITLE OF INVENTION:**           DIAGNOSIS AND TREATMENT OF  
8   Alk-7 RELATED DISORDERS

9

10                  **(iii) NUMBER OF SEQUENCES:**       15

11

12                  **(iv) CORRESPONDENCE ADDRESS:**

13

14                  (A) ADDRESSEE:                   Lyon & Lyon  
15                  (B) STREET:                        633 West Fifth Street  
16   Suite 4700

17

18                  (C) CITY:                         Los Angeles

19

20                  (D) STATE:                       California

21

22                  (E) COUNTRY:                      U.S.A.

23

24                  (F) ZIP:                         90071-2066

25

26                  **(v) COMPUTER READABLE FORM:**

27

28                  (A) MEDIUM TYPE:                3.5" Diskette, 1.44 Mb  
29   storage

30

31                  (B) COMPUTER:                   IBM Compatible

32

33                  (C) OPERATING SYSTEM:           IBM P.C. DOS 5.0

34

35                  (D) SOFTWARE:                   FastSEQ for Windows 2.0

36

37                  **(vi) CURRENT APPLICATION DATA:**

38

39                  **(A) APPLICATION NUMBER:**       To be assigned  
40                  **(B) FILING DATE:**                Filed herewith

41

42                  **(C) CLASSIFICATION:**

43

44                  **(vii) PRIOR APPLICATION DATA:**

45

46                  **(A) APPLICATION NUMBER:**       60/044,428

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47 (B) FILING DATE: April 28, 1997  
48  
49

## 50 (viii) ATTORNEY/AGENT INFORMATION:

51

52 (A) NAME: Warburg, Richard J.  
53 (B) REGISTRATION NUMBER: 32,327  
54 (C) REFERENCE/DOCKET NUMBER: 234/118

55

56

## 57 (ix) TELECOMMUNICATION INFORMATION:

58

59 (A) TELEPHONE: (213) 489-1600  
60 (B) TELEFAX: (213) 955-0440  
61 (C) TELEX: 67-3510

62

63

64

## 65 (2) INFORMATION FOR SEQ ID NO: 1:

66

## 67 (i) SEQUENCE CHARACTERISTICS:

68

69 (A) LENGTH: 1793 base pairs  
70 (B) TYPE: nucleic acid  
71 (C) STRANDEDNESS: single  
72 (D) TOPOLOGY: linear

73

## 74 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

75

76 CGGCCACACT GACTAGAGCC AACCGCGCAC TTCAAAAGGG TGTGGTGCC GCGCTCCCCT	60
77 CCCCGGGCCC GGGAACTTCA AAGCGGGCCG TGCTGCCCCG GCTGCCTCGC TCTGCTCTGG	120
78 GGCCCTCGCAG CCCCCGGCGCG GCCGCCTGGT GGCATGACC CGGGCGCTCT GCTCAGCGCT	180
79 CCGCCAGGCT CTCCCTGCTGC TCCGAGCGGC CGCCGAGCTC TCGCCAGGAC TGAAGTGTGT	240
80 ATGTCTTTG TGTGATTCTT CAAACTTAC CTGCCAAACA GAAGGAGCAT GTTGGGCATC	300
81 AGTCATGCTA ACCAACATGAA AAGAGCAGGT GATCAAATCC TGTGTCTCCC TTCCAGAACT	360
82 GAATGCTCAA GTCTTCTGTC ATAGTTCAA CAATGTTACC AAAACCGAAT GCTGCTTCAC	420
83 AGATTTTGCA AACAAACATAA CACTGCACCT TCCAACAGCA TCACCAAATG CCCCAAAACT	480
84 TGGACCCATG GAGCTGGCCA TCATTATTAC TGTGCCTGTT TGCCTCCTGT CCATAGCTGC	540
85 GATGCTGACA GTATGGCAT GCCAGGGTCG ACAGTGCTCC TACAGGAAGA AAAAGAGACC	600
86 AAATGTGGAG GAACCACTCT CTGAGTGCAA TCTGGTAAAT GCTGGAAAAA CTCTGAAAGA	660
87 TCTGATTTAT GATGTGACCG CCTCTGGATC TGGCTCTGGT CTACCTCTGT TGGTTCAAAG	720
88 GACAATTGCA AGGACGATTG TGCTTCAGGA AATAGTAGGA AAAGGTAGAT TTGGTGAGGT	780
89 GTGGCATGGA AGATGGTGTG GGGAAAGATGT GGCTGTGAAA ATATTCTCCT CCAGAGATGA	840
90 AAGATCTTGG TTTCTGTGAGG CAGAAATTAA CCAGACGGTC ATGCTGCGAC ATGAAAACAT	900
91 CCTTGGTTTC ATTGCTGCTG ACAACAAAGA TAATGGAACT TGGACTCAAC TTTGGCTGGT	960
92 ATCTGAATAT CATGAACAGG GCTCCTTATA TGACTATTTG AATAGAAATA TAGTGACCGT	1020
93 GGCTGGAATG ATCAAGCTGG CGCTCTCAAT TGCTAGTGGT CTGGCACACC TTCATATGGA	1080
94 GATTGTTGGT ACACAAAGGTA AACCTGCTAT TGCTCATCGA GACATAAAAT CAAAGAATAT	1140
95 CTTAGTGAAA AAGTGTGAAA CTTGTGCCAT AGCGGACTTA GGGTTGGCTG TGAAGCATGA	1200
96 TTCAATACTG AACACTATCG ACATACCTCA GAATCCTAAA GTGGGAACCA AGAGGTATAT	1260
97 GGCTCCTGAA ATGCTTGATG ATACAATGAA TGTGAATATC TTTGAGTCCT TCAAACGAGC	1320
98 TGACATCTAT TCTGTTGGTC TGGTTACTG GGAAATAGCC CGGAGGTGTT CAGTCGGAGG	1380
99 AATTGTTGAG GAGTACCAAT TGCCATTATTA TGACATGGTG CCTCGAGATC CCTCGATAGA	1440

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100 GGAAATGAGA AAGGTTGTTT GTGACCAGAA GTTCGACCA AGTATCCCAA ACCAGTGGCA 1500  
101 AAGTTGTGAA GCACTCCGAG TCATGGGGAG AATAATGCGT GAGTGTGGT ATGCCAACGG 1560  
102 AGCGGCCCCGC CTAACTGCTC TTCTATTAA GAAGACTATA TCTCAACTTT GTGTCAAAGA 1620  
103 AGACTGCAAA GCCTAATGAT GATAATTATG TTAAAAAGAA ATCTCTCATA GCTTTCTTTT 1680  
104 CCATTTTCCC CTTTATGTGA ATGTTTTGTC CATTTCCTTT TTGTTCTACC TCAAAGATAA 1740  
105 GACAGTACAG TATTAAAGTG CCCATAAGGC AGCATGAAAA GATAACTCTA AAG 1793  
106  
107  
108

109 (2) INFORMATION FOR SEQ ID NO: 2:

110  
111 (i) SEQUENCE CHARACTERISTICS:

112  
113 (A) LENGTH: 493 amino acids  
114 (B) TYPE: amino acid  
115 (C) STRANDEDNESS: single  
116 (D) TOPOLOGY: linear

117  
118 (ii) MOLECULE TYPE: Peptide

119  
120 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

121  
122 Met Thr Arg Ala Leu Cys Ser Ala Leu Arg Gln Ala Leu Leu Leu Leu  
123 1 5 10 15  
124  
125 Ala Ala Ala Ala Glu Leu Ser Pro Gly Leu Lys Cys Val Cys Leu Leu  
126 20 25 30  
127  
128  
129 Cys Asp Ser Ser Asn Phe Thr Cys Gln Thr Glu Gly Ala Cys Trp Ala  
130 35 40 45  
131  
132 Ser Val Met Leu Thr Asn Gly Lys Glu Gln Val Ile Lys Ser Cys Val  
133 50 55 60  
134  
135 Ser Leu Pro Glu Leu Asn Ala Gln Val Phe Cys His Ser Ser Asn Asn  
136 65 70 75 80  
137  
138 Val Thr Lys Thr Glu Cys Cys Phe Thr Asp Phe Cys Asn Asn Ile Thr  
139 85 90 95  
140  
141 Leu His Leu Pro Thr Ala Ser Pro Asn Ala Pro Lys Leu Gly Pro Met  
142 100 105 110  
143  
144 Glu Leu Ala Ile Ile Ile Thr Val Pro Val Cys Leu Leu Ser Ile Ala  
145 115 120 125  
146  
147 Ala Met Leu Thr Val Trp Ala Cys Gln Gly Arg Gln Cys Ser Tyr Arg  
148 130 135 140  
149  
150 Lys Lys Lys Arg Pro Asn Val Glu Glu Pro Leu Ser Glu Cys Asn Leu  
151 145 150 155 160  
152

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153 Val Asn Ala Gly Lys Thr Leu Lys Asp Leu Ile Tyr Asp Val Thr Ala  
154 165 170 175  
155  
156 Ser Gly Ser Gly Ser Gly Leu Pro Leu Leu Val Gln Arg Thr Ile Ala  
157 180 185 190  
158  
159 Arg Thr Ile Val Leu Gln Glu Ile Val Gly Lys Gly Arg Phe Gly Glu  
160 195 200 205  
161  
162 Val Trp His Gly Arg Trp Cys Gly Glu Asp Val Ala Val Lys Ile Phe  
163 210 215 220  
164  
165 Ser Ser Arg Asp Glu Arg Ser Trp Phe Arg Glu Ala Glu Ile Tyr Gln  
166 225 230 235 240  
167  
168 Thr Val Met Leu Arg His Glu Asn Ile Leu Gly Phe Ile Ala Ala Asp  
169 245 250 255  
170  
171 Asn Lys Asp Asn Gly Thr Trp Thr Gln Leu Trp Leu Val Ser Glu Tyr  
172 260 265 270  
173  
174 His Glu Gln Gly Ser Leu Tyr Asp Tyr Leu Asn Arg Asn Ile Val Thr  
175 275 280 285  
176  
177 Val Ala Gly Met Ile Lys Leu Ala Leu Ser Ile Ala Ser Gly Leu Ala  
178 290 295 300  
179  
180 His Leu His Met Glu Ile Val Gly Thr Gln Gly Lys Pro Ala Ile Ala  
181 305 310 315 320  
182  
183 His Arg Asp Ile Lys Ser Lys Asn Ile Leu Val Lys Lys Cys Glu Thr  
184 325 330 335  
185  
186 Cys Ala Ile Ala Asp Leu Gly Leu Ala Val Lys His Asp Ser Ile Leu  
187 340 345 350  
188  
189 Asn Thr Ile Asp Ile Pro Gln Asn Pro Lys Val Gly Thr Lys Arg Tyr  
190 355 360 365  
191  
192  
193 Met Ala Pro Glu Met Leu Asp Asp Thr Met Asn Val Asn Ile Phe Glu  
194 370 375 380  
195  
196 Ser Phe Lys Arg Ala Asp Ile Tyr Ser Val Gly Leu Val Tyr Trp Glu  
197 385 390 395 400  
198  
199 Ile Ala Arg Arg Cys Ser Val Gly Gly Ile Val Glu Glu Tyr Gln Leu  
200 405 410 415  
201  
202 Pro Tyr Tyr Asp Met Val Pro Ser Asp Pro Ser Ile Glu Glu Met Arg  
203 420 425 430  
204  
205 Lys Val Val Cys Asp Gln Lys Phe Arg Pro Ser Ile Pro Asn Gln Trp

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206          435           440           445
207
208 Gln Ser Cys Glu Ala Leu Arg Val Met Gly Arg Ile Met Arg Glu Cys
209      450           455           460
210
211 Trp Tyr Ala Asn Gly Ala Ala Arg Leu Thr Ala Leu Arg Ile Lys Lys
212      465           470           475           480
213
214 Thr Ile Ser Gln Leu Cys Val Lys Glu Asp Cys Lys Ala
215      485           490

```

219 (2) INFORMATION FOR SEQ ID NO: 3:

221 (i) SEQUENCE CHARACTERISTICS:

223 (A) LENGTH: 8 amino acids  
224 (B) TYPE: amino acid  
225 (C) STRANDEDNESS: single  
226 (D) TOPOLOGY: linear

228 (ii) MOLECULE TYPE: Peptide

230 (ix) FEATURE:

232 (D) OTHER INFORMATION: "Xaa" in positions 6 and 7 stand  
233 for an unspecified amino acid.

235 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

237 His Arg Asp Leu Lys Xaa Xaa Asn  
238 1 5

242 (2) INFORMATION FOR SEO ID NO: 4:

244 (i) SEQUENCE CHARACTERISTICS:

246 (A) LENGTH: 23 base pairs  
247 (B) TYPE: nucleic acid  
248 (C) STRANDEDNESS: single  
249 (D) TOPOLOGY: linear

251 (ix) FEATURE:

253 (D) OTHER INFORMATION: The letter "R" stands for A or G.  
254 The letter "N" stands for Inosine.

256 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

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**SEQUENCE VERIFICATION REPORT  
PATENT APPLICATION US/09/069,228**

DATE: 05/08/98  
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Line	Error	Original Text
39	Wrong application Serial Number	(A) APPLICATION NUMBER: To be assigned

09069228 042798